



# Development near Active and Closed Landfills

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# Introduction

- Landfill History
- Current Setback Policy (AB, SK, MB)
- Science of setbacks?
- Current landfill locations (AB, SK, MB)
- Impacts of nearby development
- Liability concerns
- Methods for municipality's to control

# Landfill History





# Alberta Landfill Regulatory History

- **1892** Edmonton Board of Health formed
- **1907** First Alberta Public Health Act
- **1910** Provincial Board of Health
- **1911** Regulations require each urban municipality to provide a nuisance ground
- **1936** Regulations provide setback of 500 yards from dwellings
- **1959** Cities and towns over 10,000 required to have 'sanitary landfills'
- **1968** Provincial Board of Health regulations introduce permits for sites serving populations over 5,000

# Alberta Landfill Regulatory History

- **1971** The Provincial Board of Health Regulations Respecting the Control of Refuse Disposal Systems (Division 12) AR 273/71
- **1973** Waste Management Assistance Program and Alberta Heritage Trust Fund
- **1983** Decentralization of municipal landfill application review to Local Boards of Health
- **1985** New Public Health Act Waste Management Regulation AR 250/85
- **1987** Hazardous Waste Regulation AR 505/87. Municipal Landfills begin to withdraw from accepting hazardous waste. Heritage Trust Fund ends.
- **1996** Alberta Environment becomes the regulator for landfills

# Alberta Setback Legislation

## **MGA – Subdivision and Development Regulation**

- Setbacks for operating landfill and non-operating hazardous waste facility (450 m), non-operating landfill, waste storage facility (300 m)
- Subdivision authority NOT to approve unless receives variance from Deputy Minister AEP
- Subdivision authority can over rule DM decision through Development Appeal Board
- <http://aep.alberta.ca/waste/waste-facilities/setbacks.aspx>
- [http://www.qp.alberta.ca/documents/Regs/2002\\_043.pdf](http://www.qp.alberta.ca/documents/Regs/2002_043.pdf)
- Between 3 and 10 applications made per year for a variance of setback

# Saskatchewan Setback Legislation

## **1986 Municipal Refuse Regulation**

- a waste disposal ground is not to be located; (a) within 500 meters of: (i) a restaurant, canteen, cafeteria or any other place where food is cooked or prepared for human consumption or is consumed; (ii) motel, hotel, domestic residence or any other building occupied as a residence; a (iii) a school, church, community centre or recreation facility or similar public building;
- The minister may approve the proposal to close the waste disposal ground and impose any terms and conditions that he considers appropriate to ensure long term protection of the environment on the approval.

# Saskatchewan Setback Legislation

## The Subdivision Regulations

- (3) an approving authority shall not approve an application for residential purposes if the land that is the subject of the application is situated within:  
(a) 457 metres of land that is used or authorized for use as a landfill for the disposal of garbage or refuse
- (4) Notwithstanding clauses (3)(a) and (b), for any existing residential development, an approving authority shall not approve an application if the land that is the subject of the application is situated within 300 metres of land that is used or authorized for use: (a) as a landfill for the disposal of garbage or refuse; or
- (7) an approving authority shall not approve an application for the purpose of developing: (a) a landfill for the disposal of garbage or refuse, unless the landfill is situated at least 457 metres from any residential development or land that is authorized for use for residential purposes;
- Closed landfills are handled under the Impacted Sites Chapter of the Saskatchewan Environmental Code



# Manitoba Setback Legislation

- A person must not construct or place a building on the site of an operating landfill, closed or abandoned landfill or within 400 metres of the site without Director approval
- [https://www.gov.mb.ca/sd/envprograms/swm/pdf/policy\\_construction\\_dwellings.pdf](https://www.gov.mb.ca/sd/envprograms/swm/pdf/policy_construction_dwellings.pdf)
- Over 50 applications for variance have been made as per Provincial records
- Large urban areas that have a LFG plan in place (Winnipeg, Brandon) manage their own liability regarding development in proximity to landfills. The Province deals with the smaller communities/facilities that do not have a LFG plan. On average there are 2 or 3 a year

# Setback Science?

## **Where did the landfill setback originate?**

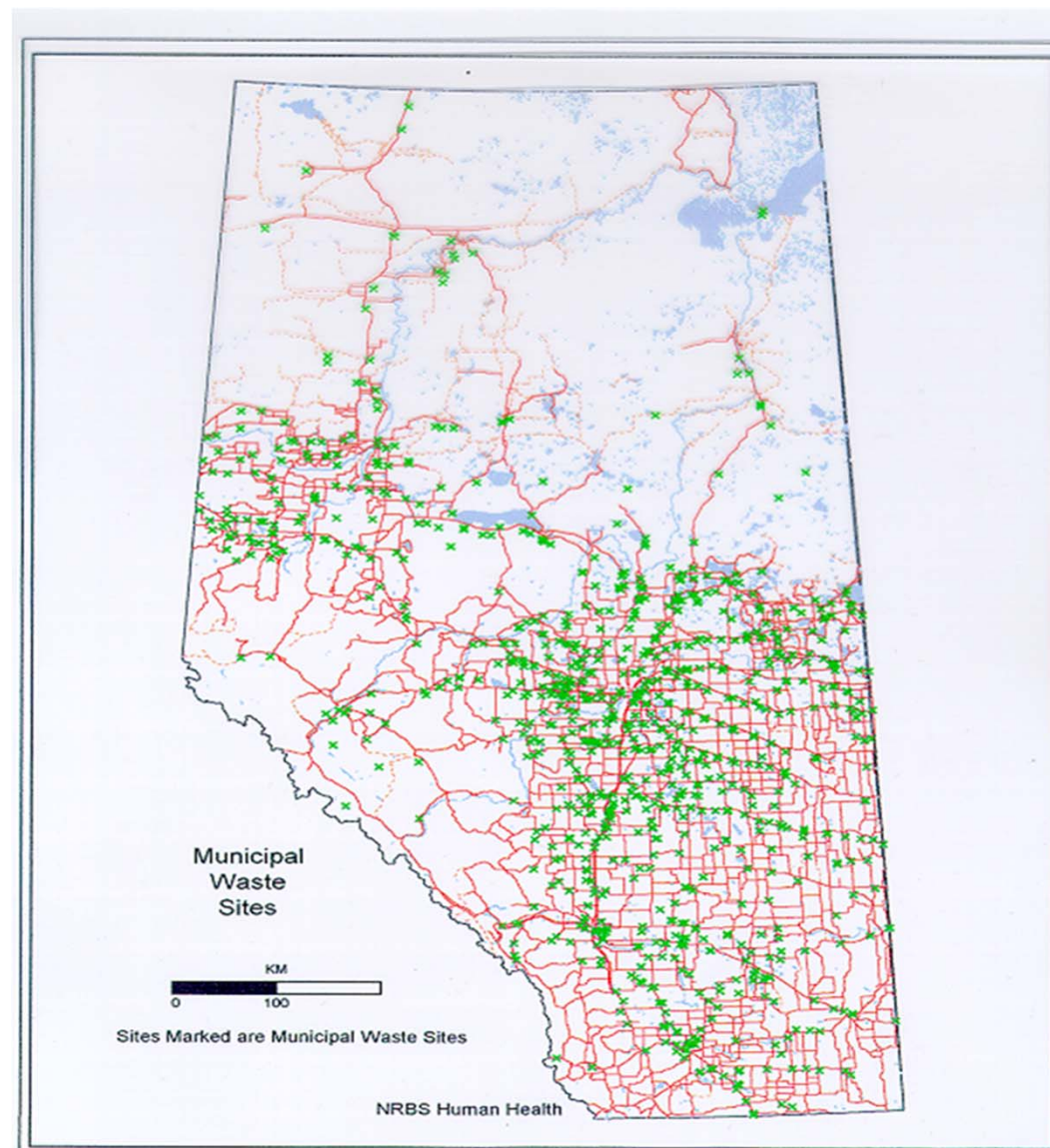
- Carry over from Public Health Act legislation
- In Alberta information is available in 'Public Health Act Waste Management Regulation Review Process, Waste Management Facility Setback Distances'
- Developed in the 1930's due to smoke and other nuisance concerns

# Setback Science?

## Potential Changes to Setback Distances for Active Landfills

- In Alberta, from landfill appeal board process for active landfills, public 1.5 km or greater distance have been granted status if there is appropriate rational on if they are directly impacted.
- Loss of property value
  - US studies showing reduction in PV for urban areas based on landfill size. There is less financial impact documented for rural areas
  - Precedence of Property value protection program from Thorhild landfill development to 2.4 KM
  - <https://www.therecord.com/opinion-story/5246320-don-t-be-so-quick-to-dump-on-landfills/>
- Legal evaluation of landfill setback distances impacting the rights of landowners (landfill must contain the setback on its own property)

# Alberta Landfill Locations



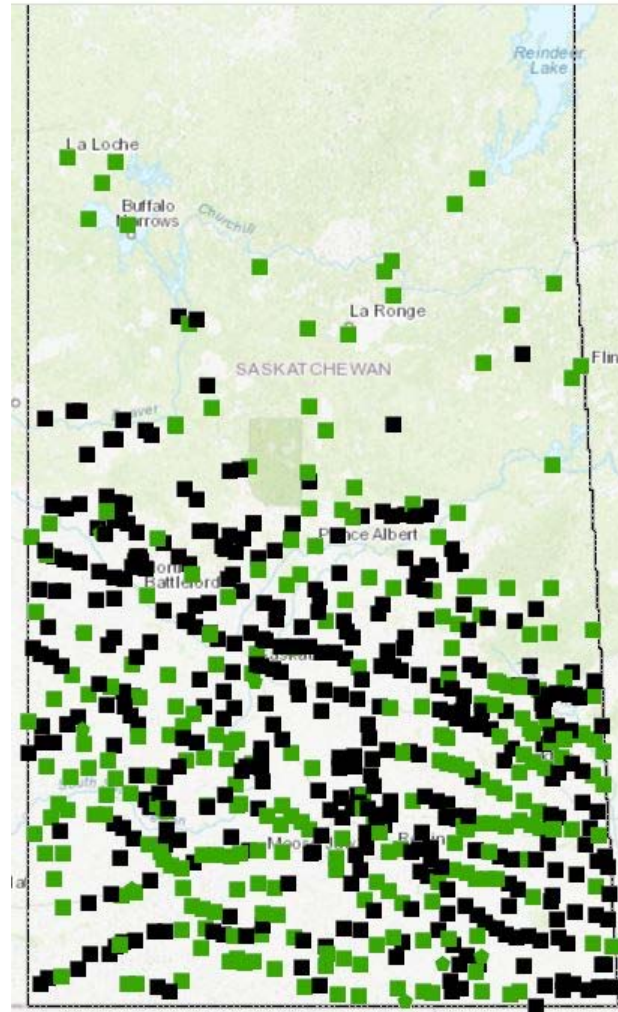
# Alberta Landfill Locations

- does not have an online searchable database for landfills
- Maclaren report from 1982 is not georeferenced to show locations of active and closed sites. A request is required to AEP to determine site location or the report is available online at:  
<https://open.alberta.ca/publications/533376>
- Landfills closed under the Heritage Trust Fund do not have closure details on file. Landfill owners to conduct its own liability assessment



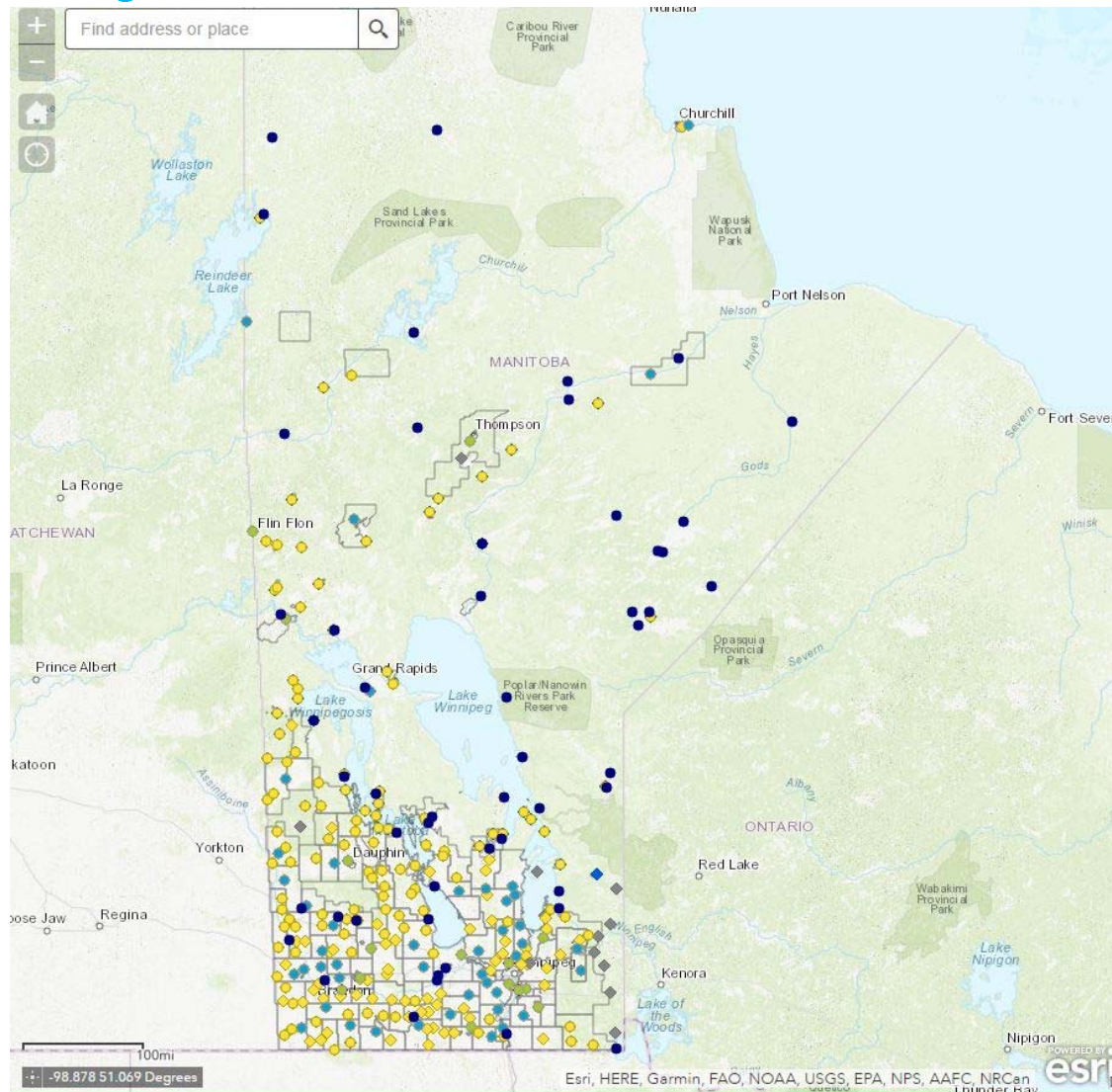
# Saskatchewan Landfill Locations

- <https://gisappl.saskatchewan.ca/Html5Ext/index.html?viewer=saskinteractive>
- Closed (black)
- Open (green)



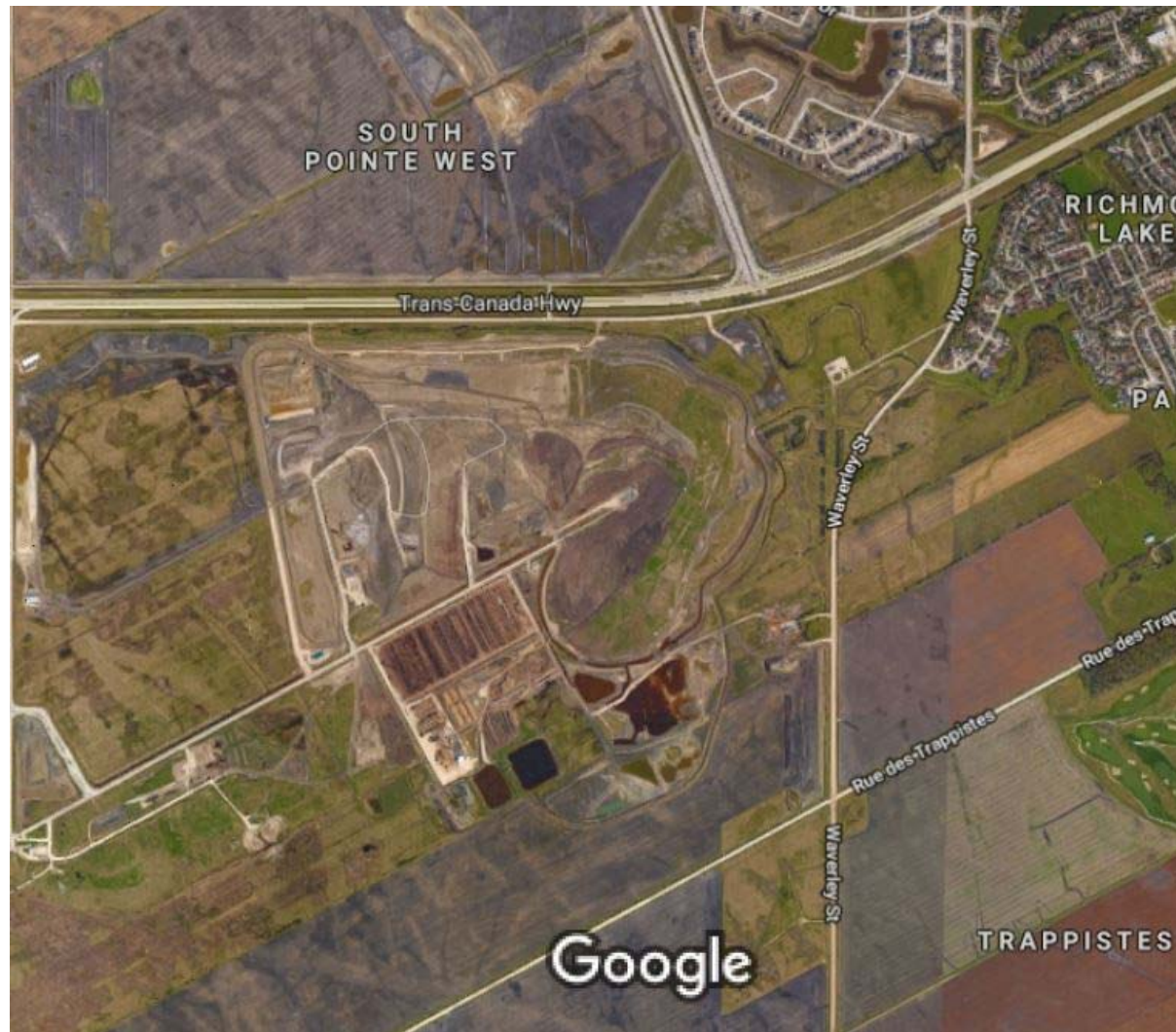
# Manitoba Landfill Locations

– <http://www.gov.mb.ca/sd/wastewise/landfill.html>





# Development Near Landfills



## Development Near Landfills





## Development Near Landfills





# Impacts of Nearby Development to Active Landfill Operation

- Gull Control Program – range \$150K to \$500K annually
- Approval/Permit Appeals (legal) – range \$100,000's to \$1,000,000's
- Landfill Liaison committee
- Landfill communications (newsletters, open house, etc.)
- Good neighbor work
- Forced landfill closure
- Common law doctrine of trespass due to nuisance

# Impacts of Nearby Development to Closed Landfill

- 1) Common law doctrine of trespass due to nuisance
- 2) Legal liability of landfill owner
- 3) Liability of responsible party (Municipality, Province) for long term risk management issues
- 4) In Alberta, variance process will include direction that caveats, restrictive covenants, or another means be provided so that notice of proximity of closed landfill is disclosed. However, province does not have financial consideration so legal instruments can be removed from title.

## Due Diligence Test

- 1) Do you know or ought to have known that landfills produce gases which may be explosive?
- 2) Do you know or ought to have known that landfills produce leachate which can contaminate drinking water sources, or kill fish? (Fisheries Act – easy to prosecute landfill owners under)
- 3) Do you know or ought to have known where all your reclaimed landfills are?
- 4) Are you monitoring them?
- 5) Did you control development near the landfill?

# Methods for Municipalities to Control Development

- 1) Develop Policy for development around landfills
  - i. Restrict/control development around active landfills
  - ii. Purchase buffer zone (green area)
  - iii. Landuse bylaw
  - iv. Develop policy on what developers are required to implement for development near closed landfills
- 2) Assess liability for closed landfills and implement methods to reduce liability such as
  - i. Subsurface landfill gas system
  - ii. Improve landfill cap
  - iii. Groundwater control system
  - iv. Surface water control improvement
  - v. Provide drinking water to impacted groundwater users
  - vi. Purchase buffer zone
  - vii. Monitoring program

# Methods for Municipalities to Control Development

- <http://www.calgary.ca/PDA/pd/Pages/Landfill-Setbacks.aspx>
- <http://www.reddeer.ca/media/reddeerca/city-government/plans-and-projects/landfill/Summary-Report.pdf>
- [https://www.mdfoothills.com/residents/planning/the\\_design\\_of\\_subdivision/setbacks\\_and\\_the\\_building\\_locations.html](https://www.mdfoothills.com/residents/planning/the_design_of_subdivision/setbacks_and_the_building_locations.html)
- <http://winnipeg.ca/waterandwaste/pdfs/garbage/CityofWinnipegClosedLandfillsStandingPolicyCommitteePresentationWeb.pdf>
- <http://winnipeg.ca/waterandwaste/garbage/landfillMonitoring.stm>
- <http://www.cbc.ca/news/canada/manitoba/closed-landfills-winnipeg-1.4136339>



# QUESTIONS?

